

REMARKS

This is in reply to the office action dated August 17, 2005. Claims 1-20 and 26-27 are pending, and new claims 28 to 31 are added. Claims 21-25 are canceled. Reexamination and reconsideration is respectfully requested. Support for new claims 30 and 31 is found on page 3, line 20 of the specification.

35 USC 112 Rejection

Claims 7-9 stand rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 has been amended to clarify the claim language without changing its scope. Although the terms "carrying out" as used in the context of the claim is believed to mean --repeating--, the language has been amended to remove any ambiguity. Claim 7, 8 and 9, in view of the amendment to claim 1, are believed to be definite.

35 USC 102 Rejection

Claims 1-14, 16-19, and 25-26 stand rejected under 35 USC 103(a) as being unpatentable over Weidman et al (6162304) in view of Van Steenburg Jr. (5195333).

The '304 patent discloses the use of a hydrofluorocarbon (HFC) for cleaning lubricated vapor compression systems. It provides no teaching or suggestion of a continuous flushing cycle where the solvent is cleaned and reused.

The '333 patent is for a refrigerant reclamation system that reclaims the refrigerant used in a refrigeration system. The system removes the refrigerant from the refrigeration system at intake 11 and passes the refrigerant through the entire reclamation system once, after which the refrigerant is stored in the chiller tank 60.

chiller tank 60 is cycled through a portion of the system which bypasses the separator tank 20. The description of the operation of the system is provided in the patent at column 4, line 61 to column 6, line 8. The reference does not teach the flushing of a solvent through the refrigeration system, let alone any of the steps as claimed to flush and reuse solvent in a continuous manner.

In making the rejection, the '304 and '333 patents were combined. However, they are not properly combinable to meet the claim limitations as there is no motivation or suggestion for doing so.

A proposed modification cannot change the principle of operation of a prior art reference. MPEP 2143.02. In the present case, the principle of operation of the '333 patent would have to be changed to make the proposed combination. As discussed above, the '333 patent operates to remove all refrigerant through intake 11 and pass it through the entire process which includes the separator 20, compressor 30, condenser 40, and chill tank 50. Once all refrigerant is removed from the refrigeration system the process is stopped. Next the refrigerant is cycled through part of the system, i.e.; the filter dryer 63, expansion valve 64, compressor 30, condenser 40, and back to the chiller 50. This last step removes acid and water and chills the refrigerant. The separator 20 which removes the oil is bypassed. It does not teach any flushing step as it is not for cleaning components, and thus does not teach or suggest repeating the flushing step in a continuous process. Instead it simply removes and cleans the refrigerant in a single step, runs a continuous cycle to remove water and acid and chill the refrigerant, and then returns the refrigerant at outlet 52. There is no teaching or suggestion to immediately return the fluid to the refrigeration system for flushing purposes and running through the entire cleaning cycle in a continuous process. To modify the '333 patent to 1) use a solvent and 2) run the entire method of claim 1 would require the '333 patent to take the solvent in at intake 11 and return the solvent at outlet 52 in a continuous cycle, which is not taught or suggested, and which is in fact contrary to the principle of operation taught

in the reference. The '333 patent is a different method intended to solve a different problem. Accordingly, there can be no motivation to do so. Claim 1 is therefore believed patentable. Claims 2-11, and 19, depending from claim 1, are likewise believed patentable.

New claim 28 requires that the cleaning step include use of a separator, which step is repeated pursuant to step (f). The '333 patent teaches passing refrigerant, not solvent, through the cleaning step using the separator only once. The separator 20 is then bypassed in any ongoing cycle to remove water from the refrigerant and chill the refrigerant. Thus there is no suggestion for this claim element and claim 28 is believed patentable.

New claim 30, depending from claim 1, includes the limitation that step (c) comprises cleaning said solvent sufficiently such that said solvent does not become more contaminated with each use, thereby allowing said solvent to be continuously reused. Since the solvent is reused pursuant to step (f), it is important that the solvent not become more and more contaminated with each pass through the component being cleaned. This is not taught or suggested in the '333 or '304 patents, neither of which teaches continuous flushing using the same solvent.

Claim 12 is believed patentable for the reasons set forth above for claim 1. New claims 29 and 31 are believed patentable for the reasons set forth above for claims 28 and 31 respectively. Claims 13-18, 20 and 22-27, depending from claim 12, are likewise believed patentable.

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CONCLUSION

Claims 1 to 20 and 26 to 31 are believed patentable for the reasons set forth above. Allowance is requested.

Respectfully submitted,

December 19, 2005



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